

HEALTH SERVICES IN THE U.S.S.R.

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As Malta's participant at the recent World Health Organization Advanced Course in Health Planning held in the Soviet Union, I had the opportunity of observing certain characteristic features of the Soviet public health system. This W.H.O. course was attended by twelve advanced students from various European countries, with lectures delivered mainly by Russians and, to a lesser extent, by other foreign experts. The teaching was primarily in English, and partially in Russian. The full course lasted 2 months, including an interesting trip, for field work, to the Republic of Moldavia, in the South-West of the Union of Soviet Socialist Republics. The curriculum provided for lectures, practical and seminar work, discussions on various widely diverging topics such as the theory and organization of medicare, health planning, and health economics. The course was run jointly by the U.S.S.R. Ministry of Public Health, and the Central Institute for Advanced Medical Training, Moscow where all the lectures took place.

Health services in the U.S.S.R. are organized to meet the requirements of a specific social system and philosophy, and are designed to provide comprehensive medical care for the whole population through the integration of curative and preventive services at all levels of administration. The basic health philosophy is one of "prophylaxis" by health protection, and it places the responsibility for the health of the people on the State. The Soviet Government has recognized the rôle played by health in a nation's economy and development, and the fact that certain population groups (e.g. children, workers, etc.) require specialized medical attention. The existing health services of the U.S.S.R. are the result of 40 years of

development, experiment, and research. The complicated structure evolved in this way consists of a number of institutions and functional units so interlocked that the result is a unified system embracing all health disciplines and reaching into every locality in the 15 constituent republics, to the smallest and most remote villages and farming areas. The basic principle of this structure is highly centralized planning and supervision, coupled with some complete executive and operational decentralization permitting the majority of problems to be dealt with at local levels, without disturbing the general and basic pattern.

Salient Features

Republican territories are subdivided into *oblasts*, which have autonomous health departments. The *oblasts* are subdivided into regions (*rayons*) and these in turn are further subdivided into health districts or sectors. The large cities have their own health departments, and they also are divided into *rayons* and health districts.

The regional health organization of the U.S.S.R. at the operational level is perhaps one of the most remarkable achievements of the Soviet health system. The *rayon* (or regional) hospital offers comprehensive and integrated health care, both for in-patients and for out-patients. It is responsible for the regular health screening of the entire population, and for the follow-up treatment and surveillance of specific conditions. This screening and follow-up method is known as "dispensarization". The *rayon* hospital is also responsible for environmental sanitation and epidemiological control of communicable diseases in the area, through a

network of sanitary and epidemiological stations. The health officer responsible for the whole area is the director of the rayon hospital, while his first deputy is in charge of sanitation and epidemiology. The rayon health unit (hospital, out-patient clinic and sanitary epidemiological station) is aided by a network of units ranging from the district unit, headed by a district doctor, to the smallest local health unit, the so called feldscher-midwife station. The districts have small cottage-type hospitals (*uchastock* hospitals), maternity homes, and preventive-curative stations in villages and farming areas.

Medical Care in Rural Areas

The most numerous rural health establishments — the outposts of the health services in the villages — are the feldscher-midwife posts. Medical out-patient and in-patient services are also provided by district hospitals. The basic types of specialist medical care are provided by the rayon hospitals. Finally, highly-skilled specialised in-patient, out-patient and advisory services are the responsibility of the oblast hospitals and specialised follow-up centres.

The basic rural medical establishments are the feldscher-midwife posts, staffed by a midwife, a feldscher and a nurse. It is usually a separate building, with two or three beds for normal deliveries. The main function of these posts is the provision of predominantly out-patient services for the population. In this case the feldscher acts as an assistant-doctor. In cases with which he is not capable of dealing himself he sends the patient to the nearest district or rayon hospital. Other functions of these feldscher-midwife posts are to improve conditions of sanitation and hygiene, to carry out environmental health measures, to carry out prophylactic work, and, most important, health education among the community. Generally, each feldscher-midwife post operates in a village with a Village Soviet (which is the primary local government body) and serves three to four villages, i.e. 300 to 900 people, depending on the locality. In addition to these posts,

there are also permanent and seasonal day nurseries, pharmacy stores, and collective-farm maternity homes.

Each rayon is then divided into a number of medical districts. The population of a rayon varies between 20,000 to 120,000 whilst each district contains between 7,000 - 12,000. The centre of a medical district is the district or *uchastock* hospital, having at least 35 beds. These district hospitals are a centre of primary specialization, having a minimum of four specialists: therapist or general medicine specialist, surgeon, gynaecologist, and a specialist in infectious diseases, besides a dentist. Each hospital provides an out-patient and in-patient service, the most important function being the provision of advisory services. Thus each doctor in the district hospital has a schedule of visits to feldscher-midwife posts.

The next level is the rayon hospital, having at least 100 beds, and is a centre providing skilled medical assistance. Thus, it also has E.N.T., paediatric, neurological and some other units. The polyclinic department, which is usually integrated with the hospital, not only provides curative and preventive services, but also serves as an advisory centre for all medical establishments in the rayon. Finally, the highest level is the oblast hospital, usually with 460 - 500 beds; occasionally, 1000 or more beds. The oblast hospital is a centre providing highly-qualified and specialist services. The polyclinic again serves as an advisory centre.

Medical Care in Urban Areas

There are three levels of medical care:

- (a) specialized central institutes;
- (b) rayon (city) hospitals;
- (c) district units, each with about 3000 adult inhabitants.

The leading figure in the organization of polyclinic services in the district units is the district physician. The district principle makes it possible to carry out a whole range of curative and prophylactic measures, to detect disease in its early stages, and to give active treatment and to take any sanitary measures.

The polyclinic provides all the basic forms of specialized care, domiciliary services and emergency services. Reflecting the general tendency in modern public-health practice towards further specialization, the polyclinics have now begun to open cardio-rheumatological, gastro-enterological and other specialized units.

The leading method used in the polyclinics is the follow-up method — "Dispensarizations". In addition to treatment, it entails the use of extensive measures of individual and social prophylaxis, ensures that the health of the population in the medical district concerned is kept under regular observation, and leads to the detection of disease in its early stages and the use of combined therapeutic and prophylactic measures to deal with it. This follow-up system covers people suffering from many groups of diseases (cardiovascular, chronic disease of the gastro-intestinal tract, chronic nervous disorders, etc.) and also certain population groups independently of occupation, such as children, pregnant women, and school-children.

Besides the polyclinic departments of the combined hospitals and the independent polyclinics, a considerable volume of out-patient work is carried out by specialized follow up centres ("dispensaries"). There are tuberculosis-control centres, cancer-control centres, and centres for the control of skin and venereal diseases, trachoma and goitre, and for physical culture therapy.

These centres usually include specialized in-patient and out-patient departments, giving all types of curative and preventive care. The centres work on the district principle and are responsible for carrying out in the area they serve a full range of prophylactic measures against the diseases they cover, for regular surveillance of the people's health and for early detection, registration and prompt treatment of cases.

In the Soviet public health system a very effective network of first-aid and emergency services has been established in close cooperation with the hospitals and polyclinics. In large cities this service is provided by special establishments —

first-aid stations — and an emergency service is provided by emergency departments in the polyclinics. In smaller towns both services are combined in a single establishment, the first-aid and emergency station. The ambulances are equipped with modern apparatus and instruments for blood transfusions, artificial respiration, electro-cardiography and other urgent procedures, thus making it possible to give the necessary treatment on the spot or on the way to the hospital as a specially-trained doctor goes out in answer to the first call. They are usually equipped with two-way radios to keep in contact with the dispatcher at the first-aid station.

Hospital Beds and Polyclinical Aid

The Soviet system, in all its various spheres, is geared on a tight assessment or norms, and their public health planning and standards are necessarily based on normative standards. On the basis of these standards it is then possible to determine the values and indices in public health plans, and the correct ratio between certain specialities. The following table gives an indication of the standards

SPECIALITY	Per 1900	Per 1000
	of child pop.	of all pop.
Surgery and orthopaedics	0.3	0.2
Otolaryngology	0.5	0.125
Tuberculosis	0.5	0.125
Neurology	0.12	0.03
Ophthalmology	0.12	0.03
Cardiology	0.05	0.0125
Child gynaecology	0.08	0.2
All the others	0.53	0.1325
Psychiatry	0.5	0.125
Psycho-somatic	4.8	1.2
TOTAL	8.0	2.0

of specialized Beds (from the general standards) per 1000 of all the population and per 1000 of children population (with 25% children population in the country).

The next table gives the standards for the urban population's requirements for out-patient on polyclinical aid calculated at a rate of ten visits on an average per person per year:—

Speciality	Average number of visits
Therapy	2
Surgery	1.5
Otolaryngology	0.4
Ophthalmology	0.5
Dermato-Venereology	9.7
Tuberculosis	0.7
Neurology	0.4
Obstetrics/Gynaecology	0.9
Paediatrics	1.2
Stomatology (dental treatment etc.)	1.7
Total	10

From such data it has been worked out that doctor/patients contacts/year amount to 6 visits, and the future plan is to increase this figure to 9 visits/year.

Medical personnel

At the end of 1970 there were 31.8 doctors per 10,000 population in the U.S.S.R., and the target is to have 35 physicians per 10,000 population. Of these 25 per 10,000 will be for ambulatory services, whilst 10 per 10,000 will be for the in-patient hospital services. Female doctors total no less than 73%.

The following table shows the norm (work-load) of an out-patient doctor per 1 hour:

Speciality	No. of Doctor-Patient Contacts/Hour	
	at Polyclinic	at home
Therapy	5	2
Surgery	9	1.25
Traumatology and Orthopaedics	7	1.25
Urology	5	1.25

Oncology (— cancer)	5	1.25
Paediatrics	5	1.50
Obstetrics/Gynaecology	5	1.25
Ophthalmology	8	1.25
Otolaryngology	8	1.25
Dermato-Venereology	8	1.25
Tuberculosis	5	1.25
Neurology	5	1.25
Psychiatry	4	1.25

Maternal and child health

This is regarded as most important in the U.S.S.R. and this policy is reflected in that both programmes are to be found permeating the general health services at all levels.

The women's consultation centres provide the most easily accessible and widespread form of maternal health by keeping a constant watch on expectant mothers throughout the entire period of pregnancy. On the average each pregnant woman visits the doctor 6-8 times during a pregnancy. During 1970, 98% of maternity cases in the U.S.S.R. were admitted to maternity homes (as independent entities or as the obstetrical department of a hospital). In urban communities 100% of deliveries took place in institutions, whilst the comparable figure for rural areas was 82%. Average length of stay after deliveries in urban is 10-11 days, and in rural areas 6 days. Legal provision is made for adequate maternity leave, both antepartum (56 days), and another 56 days postpartum. It is well to point out that all women are at work.

The main establishment providing medical services for children are children's hospitals and children's polyclinics, while creches, children's homes and kindergarten help in bringing up the younger children. The children's polyclinics keep all babies and infants under regular observation, and carry out many different kinds of sanitary and prophylactic work, home visiting, regular examinations, etc. and all types of curative treatment. Schoolchildren are also looked after at school itself by the school doctors. Small children, up to the age of 3 years, are cared for in permanent creches or nurseries, and there

are also a number of seasonal creches. In some areas up to 30% of these children are admitted to permanent nurseries as all the women (up to age 60) have to be at work. Some of these children stay in the creches, and are only taken home by their parents during weekends.

Vaccination against smallpox and B.C.G. are compulsory in the U.S.S.R. Immunization with triple vaccine, and against poliomyelitis are carried out as routine measure, and the child population is for all practical purposes fully immunized. B.C.G. is given at the first 3 days of life, and smallpox at 10-12 months. In between, D.T.P. is given.

Occupational health

This is apparently given an important place in the public health programme to keep pace with the rapid industrial development of the country. There are at present 12 institutes of industrial hygiene and occupational diseases under the control of the Ministry of Health. In addition, the All-Union Council of Trade Unions controls six institutions of labour protection.

The institutes of industrial hygiene and occupational diseases are engaged mainly in experimental and research work, both basic and applied. They all participate in the formulation of codes, rules and regulations for the protection of the health of the workers at the places of employment. These institutes also study the various types of industrial processes, with the object of changing the techniques and devising new methods and procedures for the health protection of the workers. They also have a few beds and act in a consultative capacity in regard to the diagnosis and treatment of occupational diseases. The institutes participate in the training of personnel by offering research opportunities to junior specialists and by providing refresher courses for factory doctors (sanitary industrial inspectors). The institutes of labour protection on the other hand, are mainly concerned with the improvement of industrial safety.

The occupational health programme is carried out by a network of medico-sanitary departments (health units) which

have to be provided in all large plants and factories. In smaller plants ambulance rooms are provided. These health units are independent organizations and provide all health services needed by the employees. A unit consists of a hospital, an outpatient clinic, ambulance rooms, "prophylactoria" and creches. The head of these medical units is at the same time the head of the hospital.

The medical department in Soviet industry carries out the same functions as industrial medical departments in other parts of the world, and provides in addition a comprehensive medical care programme for the employees, and in some cases for their families as well. Special emphasis is placed on the following:

- (a) Periodic physical examinations (which are termed prophylactic examinations) carried out by a special committee of all the specialists attached to the department.
- (b) Safety committees, depending to a great extent on the active participation and support of the trade unions.
- (c) Health education.
- (d) First-aid organization. In each factory of 1200-1500 workers, 20 to 30 voluntary workers are trained in first-aid techniques.
- (e) Physiotherapy and physical medicine are practised on an extensive scale and appear to receive much more attention than elsewhere in the world.
- (f) Prophylactoria (day and night sanatoria), where workers in need of some medical supervision are accommodated during their free time, but still carry out their everyday work without interruption.

The number of medical and paramedical personnel employed in occupational health programmes is greater than the number usually found in other countries. For example, a plant employing 10,000 workers has 26 doctors and 161 nurses and nurse-aides, and a plant employing 20,000 workers (with 25,000 dependants) has 135 doctors and 853 paramedical personnel.

It is well to bear in mind that the budget of all health services in industry

is included in the total budget of the Ministry of Health.

Conclusion

I have highlighted the basic principles of public health services in the U.S.S.R. which presumably under the existing State system must be the best for this vast continent. The overall emphasis on centralisation and on the rigid normative standards which have to be followed must certainly have their drawbacks.

Naturally I visited a number of top Soviet establishments such as the Semashko Scientific Research Institute of Social Hygiene and Public Health Organization, the Institute of Clinical and Experimental Surgery, the Central Institute of Traumatology and Orthopaedics, the

Gamaleya Institute of Epidemiology and Microbiology, Institute of Oncology, and various hospitals and polyclinics. But generally speaking I wasn't at all too impressed, maybe because I kept comparing their standards with the Scandinavian countries which I had visited earlier in the year. I saw quite a lot of overcrowding in the hospitals, where most of the equipment is rather poor and worn out, and where the diet is meagre, and has not shown any improvement since 1953. On an average patients seem to spend an excessively long time in hospitals, and some conditions, such as influenza have also got to be hospitalised because of the poor housing standards. When all is said and done I can honestly say that in a number of public health services we are better off than people in the U.S.S.R.